

Commissioner for Patents

Serial Number 09/990,876

REMARKS

The Examiner has rejected claims 1-2 and 17-18 under 35 U.S.C. 103(a) as being unpatentable over Tan et al. (US 5,772,453).

Tan et al. describe an arrangement for the adoption of either the traditional UART D-Sub connector or the upgrading USB connector with a same motherboard. The design comprises a side-by-side dual-port USB connector assembly with a traditional D-Sub connector.

The Applicant has amended the claims to overcome the rejection by the examiner. Claims 1, 2, 3, 4, 5, 7, 17, and 18 have been amended. No new subject matter has been entered as a result of the amendment.

Claim 1 is directed to a computer motherboard-mounted graphics card having at least one I/O connector. The card comprises a DVI connector footprint capable of receiving a DVI connector and positioned on the graphics card adjacent to a vertical edge of the card; an HD-15 connector footprint capable of receiving an HD-15 connector and positioned on the graphics card behind the DVI connector footprint; and one of a right-angle, vertical edge, DVI connector and a right-angle, vertical edge HD-15 connector mounted with pins in a selected one of the DVI connector footprint and the HD-15 connector footprint.

The amendment made to claim 1 now defines one of an HD-15 connector and a DVI connector connected to the recited footprints. The Applicant believes this, along with the positive recitation of the DVI connector footprint and HD-15 connector footprint, to distinguish the claim with respect to the cited art.

As stated by the Examiner, Tan et al. does not disclose having a footprint for a DVI connector and a footprint for an HD-15 connector. It would not have been obvious to provide one of a DVI connector and an HD-15 connector in combination with the appropriate footprints on a graphics card based on Tan et al. alone without additional teachings in the art. Tan et al. teaches away from the invention, which consists in reducing interference between two connectors by having the higher

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bandwidth connector closer to the edge of the board. In Tan et al., the higher bandwidth connector, namely the USB connector, is located away from the edge of the board. Furthermore, the two connectors disclosed by Tan et al. are both generally low bandwidth connectors and therefore, are not intuitively interchangeable with higher bandwidth connectors such as those recited in claim 1. It is known in the field of connectors that high bandwidth connectors may suffer from Interference when placed in close proximity. Therefore, it would not have been obvious to simply switch the connectors disclosed by Tan et al. for those of the present claims.

It would have taken additional knowledge about DVI and HD-15 connectors to modify the device described by Tan et al. to obtain the claimed invention. The Examiner has not stated what source this additional knowledge is to be taken from and the Applicant respectfully submits that it does not come from general common knowledge.

Claim 17 has been amended in a similar fashion as claim 1. Claim 17 is directed towards method of manufacturing motherboard-mounted computer graphic cards having at least one I/O connector. The method comprises providing at least a DVI connector footprint capable of receiving a DVI connector and positioned on each one of the computer cards adjacent to a vertical edge of the card, and an HD-15 connector footprint capable of receiving an HD-15 connector and positioned on each one of the computer cards further from the vertical edge than the DVI connector footprint; providing a plurality of different right-angle, vertical edge, DVI and HD-15 connectors having mounting pins receivable by a selected one of the DVI connector footprint and the HD-15 connector footprint, the DVI and HD-15 connectors being adapted to reach the selected one of the footprints while providing a vertical edge I/O connector substantially at a common position with respect to the cards; selectively mounting one of the plurality of DVI and HD-15 connectors to one of the footprints to manufacture cards having a first I/O connector configuration; and selectively mounting another one of the plurality of DVI and HD-15 connectors to another one of the footprints to manufacture cards having a second I/O connector configuration.

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For the same arguments as stated above, the Applicants believe it is not taught or suggested by Tan et al. to provide the DVI connector footprint and the HD-15 connector footprint, and to mount one of a DVI connector and an HD-15 connector into one of the recited footprints.

The amendments to claims 2-5, 7, and 18 are to adjust the language of the claims accordingly, as per the newly amended claims 1 and 17.

The Applicants believe the claims, as they currently stand, overcome the Examiner's obviousness rejections and a Notice of Allowance for claims 1-12 and 16-21 is respectfully requested.

Respectfully submitted,
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November 4, 2003

Date